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Inwood Park, Manhattan

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Inwood Park is located in the Borough of Manhattan, New York City, at the extreme northwest corner of Manhattan Island, extending to the Hudson River on the west and to Spuyten Duyvil Creek, also known as the "Ship Canal," on the north (Fig. 1.). Because it was a camping ground of the Indians of Manhattan and still preserves many evidences of their occupancy, and possesses, furthermore, most attractive scenic features as well as an interesting and varied flora, it deserves to be better known.

My own acquaintance with the region dates from the summer of 1918. At that time I was detailed by the United States Department of Agriculture to search the country about New York City for chestnut trees resistant to the bark blight. In the course of my peregrinations I came across this interesting locality, where by the way, several specimens of disease-resistant chestnut were found. I was indeed surprised to find that on Manhattan Island, the busy, thickly populated borough which is the original New York City, a wild, wooded section of this sort existed. Then it was still owned privately and was in considerable *dishabille*—especially the parts such as Shorakapkok Glen. Fallen trees, dead decaying branches, weeds and climbing plants, together with the vigorous growth of tall, stately tulips and oaks, and an understory of spice bush, all combined to produce an effect of natural wildness that was far remote from the general conception of what is meant by New York City. It is most fortunate that since then all this land has been taken over by the city under the name of "Inwood Park," and fortunate also that for the most part it has been left in a state of nature: some roadways and paths have been constructed, and

the private organization, the Dyckman Institute, has done much toward making Shorakapkok Glen more attractive.

How to Reach the Park. The best way to reach Inwood Park is via the Dyckman Street Station of the Broadway-



Figure 1. Contour map of Inwood region. Enlarged from Harlem sheet, U. S. Geological Survey, edition of 1900, reprinted 1928. Many of the recent streets are not shown. 1, Cock Hill; 2, Ostrya Hill; 3, Hill of the Five Oaks; 4, Shorakapkok Glen. The hill to the west of Ostrya Hill was occupied by the "House of Rest." $3\frac{1}{4}$ inches=one mile.

Seventh Avenue Subway. Walk west toward the Hudson River, crossing Broadway, and turn up Payson Avenue, the second street to the right beyond Broadway. Or, one may continue on the Subway to the 207th Street Station—the one next to Dyckman Street. Proceeding west on 207th Street, a walk of a few blocks brings one to the Park. The road turns to the

north here, skirting the hill, with Spuyten Duyvil Creek on the right, and eventually ends at Shorakapkok Glen.

Geographic Features. Inwood Park contains three principal elevations. 1. *Cock Hill*, so called during Revolutionary times, with an altitude of about 220 feet, is the highest and westernmost, commanding a view of the Hudson and the Palisades to the west and northwest, as well as the mouth of Spuyten Duyvil Creek¹ where it enters the Hudson. It is also generally known as Inwood Hill. On a southern shoulder of this hill stands the "House of Rest." (p.121). 2. Almost due south of Cock Hill lies another, lesser elevation, about 140 feet at the highest point, which we may call "*Ostrya Hill*," from two small hop-hornbeams (*Ostrya virginiana*) near its northern end. Here a ledge of bare rock is exposed, from which is afforded a view to the eastward of the upper part of Manhattan and, at certain points, of University Heights (New York University); also to the northward, through the trees, of the hill beyond Spuyten Duyvil Creek. 3. Northeast of *Ostrya Hill* is still another eminence, of about the same elevation (really a shoulder-like extension of *Ostrya Hill*) and plateau-like—so flat, indeed, that a tennis court, it appears, was once located there. For this, because there are splendid specimens of five different species of oak growing there within a short radius, we would suggest the name "*Hill of the Five Oaks*."

Shorakapkok Glen, also known locally as Cold Spring Hollow,² the depression between the Hill of the Five Oaks and Cock Hill, slopes gradually upward toward the south from the shore of Spuyten Duyvil Creek. On its western side, in caves formed of giant slabs of rock which in past ages became detached from

¹ Spuyten Duyvil Creek gets its name from *Spyt den duivel*, which is the Dutch equivalent for "in spite of the devil." "Supposed to be derived from the following circumstance: When the English fleet appeared in New Amsterdam (New York) Harbor, the governor's trumpeter was sent to warn the farmers up the Hudson and summon them to the defense of the city; on reaching this creek he found no ferryman willing to take him across on account of the high wind, and swore to cross the stream "spyt den duivel"; but was drowned in the attempt to swim across." *Encyclopedia Americana*. Vol. 25, p. 461. 1928. This narrow strip of water, which bounds the north end of Manhattan Island, connects the Harlem and the Hudson Rivers. Since it was straightened for navigation purposes it is now often known as the "Ship Canal."

² Bolton, Reginald Pelham. *Washington Heights, Manhattan: its eventful past*. p. 2. Dyckman Institute: New York, 1924.

the near-precipice above, dwelt members of a tribe of Indians who were inhabiting the upper end of Manhattan Island when the white men arrived in the early 1600's. These were the "Rechgawawanc, probably 'Rechgawac's people' [Rechgawac being the sachem] but they were part of the Weckquaesgeek, a larger chieftaincy which had its headquarters at Dobbs Ferry."³ That these Indians lived here is attested by the finding of their rude implements buried in layers of ashes on the floors of the caves, and by the ancient shell heaps, the remains of which may still be seen near the path leading down into the valley and elsewhere in this neighborhood. "Here, in the solitude of wild nature, it will take but little effort of the imagination to bring before the mind the scene, when the bustling horde of Rechgawawanc swarmed about the rocks, through the woods, and along the banks of the creek—the men bearing from their log canoes baskets filled with oysters, the squaws mending grass nets and hempen fishing lines, or filling the cooking-pots with red-hot stones from the wood fires, the smoke of which blackened and the heat of which split the sides of the rocks beneath which they were kindled; the girls carrying water in gourds from the gushing spring; the boys playing games with bones or stones or practicing their future prowess with bow and arrow; while the papooses with baby stolidity were perched near the crackling fires, sucking a bone of the latest toothsome addition to the larder, be it deer, dog, or bear.

Or amid the wintry snows, when the fires were kindled inside the rock-shelters, and within the bark huts erected on the shell-covered knolls, one can readily picture the same occupants wrapped in furry bear, downy beaver, or silky deer skins, huddled around the crackling logs, pounding corn, boiling "sapsis," scraping hides, splitting pebbles and flints, and longing for the return of spring."⁴

The "gushing spring," which they must have cherished, has been cleared out and preserved in a most fitting and artistic manner by the Dyckman Institute, and will be found near the shore of the creek and by the side of the little building which forms the Indian Museum of the Institute.

³ Bolton, R. P., l. c. p. 3.

⁴ Bolton, l. c. p. 14.

NOTES ON THE VEGETATION

The following observations are for the most part set forth in the form of a guide, and apply mainly to the woody plants, for the reason that these plants form the most conspicuous features of the vegetation. They are given partly for the sake of a record and partly to assist beginners who wish to become acquainted with the plants of this interesting region.

1. *Ostrya Hill*. To explore the southern slope of *Ostrya Hill* we may enter the Park via Dyckman Street and Payson Avenue, turning in from the street to the woods on the left, just after passing a road on the left, and a vacant lot. A few paces bring us to a path which circles the south side of the hill, and nearby we find the black cherry, sassafras, bitternut hickory, a lone tree of black walnut (close to the path), hackberry, ailanthus, and staghorn sumac—the last not common in Greater New York. Thick mats of Japanese honeysuckle cover much of the ground; and here and there also the poison ivy, really a creeping or climbing species of sumac, may be distinguished by its three leaflets. The common elder grows near the path, as also a lone, young pear tree, and further on an apple tree, as well as the black locust and American elm. The slippery elm, with larger, rougher leaves, ash-gray twigs and mucilaginous bark with its peculiar flavor, grows a few yards farther to the north in this same section, near a wildling peach. The last, together with the pear, apple, ailanthus, and Japanese honeysuckle are living testimonials of the white man's invasion.

Further up the hill to the northward we find a small tree of the comparatively rare red mulberry—the native species, with larger, rougher leaves than the far more common and introduced white mulberry. This little mulberry grows in a comparatively open space bordered by white ash and black cherry. Continuing up the hill past a large white oak, the path leads past the rear of a house. Near this point, on the left, climbing high on dead elder stems and other upright supports, we recognize the moonseed, an attractive native vine which grows also just across the river along the Palisades.

Continuing northward we come out opposite a large tulip tree onto a road, and a few paces bring us to the brick piers of the rear entrance to the "House of Rest." This has for many

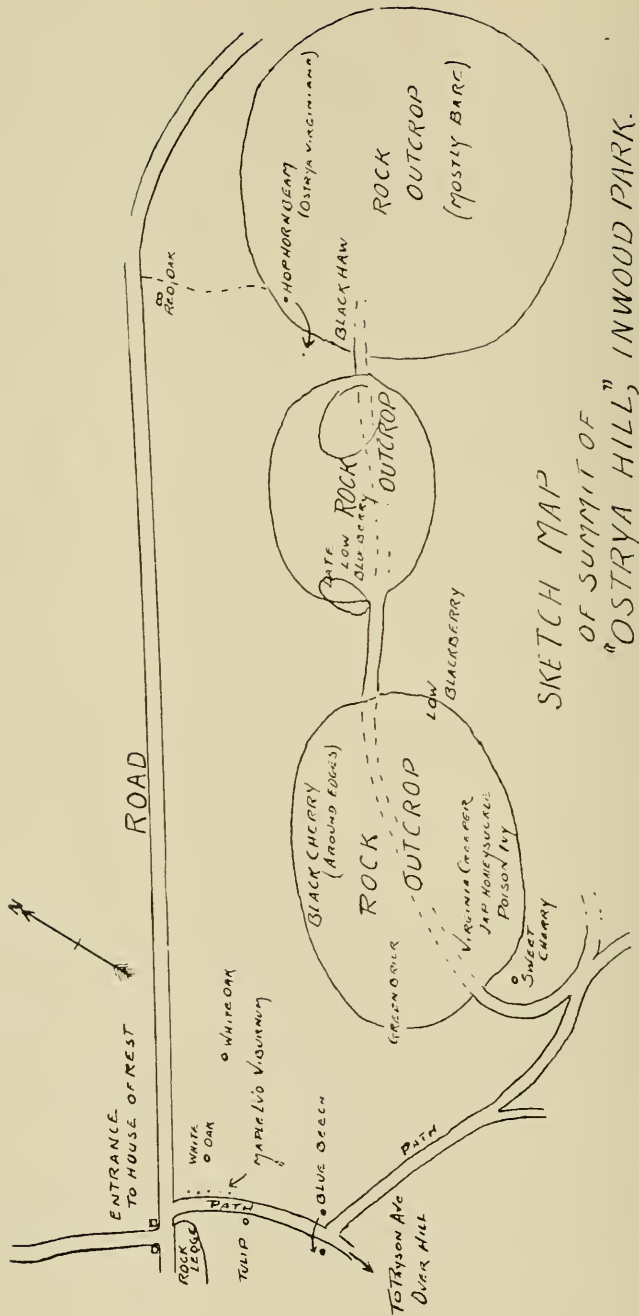


FIGURE 2. Sketch map of summit of Ostrya Hill. One inch = approximately 40 feet.

years been a home for consumptives, but has now become city property.

Opposite the entrance gates near a low, rounded outcrop of stone, we turn into the path leading off to the right (southeastward), over the hill. Large white oaks are on our left, a tulip tree near the path on the right, with several small blue beeches nearby. The low, maple-leaf viburnum is much in evidence. We do not go down the hill, but take the first turn to the left, and strike for the bare ledges to the northeastward. A rough sketch of the locality is given in text figure 2. On reaching the first bare rock outcrop we find the green brier, the Virginia creeper, the poison ivy, and the Japanese honeysuckle all striving to cover it. At the further end of this outcrop grows a form of the dewberry (*Rubus villosus*), perhaps variety *humifusus*. At the next bare spot we come upon a patch of the late low blueberry, a plentiful supply of stunted black cherry (for the soil here is extremely thin where it exists at all) and a few other low trees. Descending slightly to the next bare ledge—which is the last—we pass by two good sized black haws, both about ten feet high, and come out at the northern terminus of this whole formation. Here and there, in clefts and hollows in the rock, grow red oak, American elm, staghorn sumac, late low blueberry, Virginia creeper, sweet birch, bitternut hickory, white ash, ailanthus, chestnut oak, and a few depauperate plants of *Rubus allegheniensis*, which seems to be the common high bush blackberry of this locality. On the western edge are the two small trees of the hop-hornbeam, growing as large as they can with the limited supply of soil at their command.⁵ The resemblance of their leaves to those of the sweet birch nearby is striking, but they can be recognized by the bark, and their twigs lack the wintergreen flavor of the birch. This whole rocky ledge, wherever it is exposed, reveals the characteristic banded structure of the Manhattan gneiss.

If we descend now to the northward, passing a fine red oak with two leaders (measuring 9 feet, 11 inches in circumference,⁶ 4 feet from the ground at the north side) we regain the road, which here turns to the eastward. Here we pause and look northwestward down into the upper limits of the Shorakapkok

⁵ A large tree of the hop-hornbeam will be found near Spuyten Duyvil Creek, at the northern foot of the "Hill of the Five Oaks." It has been incorrectly labelled "*Carpinus caroliniana*."

Glen. Down the hill, about 30 feet to the northwest, is another fine red oak (9 feet, 1 inch in circumference measured 4 feet from the base on the south side) with strong buttressing roots, and a little further on, in the same direction, one of the native hemlocks.

2. *Shorakapkok Glen*. To explore the Glen we now go back on the road about thirty paces, passing by a few plants of the rather rare wineberry (*Rubus phoenicolasius*), its stems covered with reddish bristles. At length we reach a path which leads down the hill past a rather large witch hazel on the right, with a fine specimen of sweet birch on the left further on. Now the path turns abruptly to descend northward down through Shorakapkok Glen. In a few paces we arrive at a little rivulet—perhaps the upper end of the gushing spring at the bottom of the valley—with a splendid hemlock on the right and a spice bush on the opposite side leaning over to reach the water. An army of jewelweed approaches from above. Continuing down the valley we come upon a large colony of staghorn sumac, some individuals being of unusually large size and measuring over a foot in circumference at the base, and over twenty feet in height. The smooth sumac may also be seen here, as well as the slippery elm. Below we come out into a considerable open space with occasional butternuts and clumps of large staghorn sumac. In the woods on our right are tall tulip trees and red oaks mingled with occasional sweet birches, flowering dogwood, and rarely slippery elm and chestnut oak. Over on the left, along the rocky cliffs, we spy the moonvine luxuriously clambering over the young trees, as well as bitternut hickory, black cherry, and some small hackberries. We come to intersecting paths with a tall tulip at the junction, and looking back up the valley can easily imagine the Indian squaws tending their crops of maize, beans, and squashes. If, indeed, they raised any crops at all, this deep, rich soil was the ideal spot for their garden.

Turning to the left, in about thirty paces we pass by a paulownia tree with a young shagbark hickory nearby. Other paulownias may be seen further up the rocky slope. With their leaves always in 2's and with a tendency to form short pointed lobes here and there, they can be readily distinguished from the catalpa with its entire leaves, usually in whorls of three. On the right at this point we see some of the finest, tallest, and straightest tulip trees in the Glen—like cathedral

columns—perhaps fifty feet up to the first branch. This path leads up to the summit of the cliff, so we retrace our steps to the tulip tree at the intersection and proceed northward again. Bending under large clumps of spice bush, which becomes more and more omnipresent the further we descend, we come again into a small open space guarded by lofty, majestic tulips. Taking the next fork to the left we go partway up the slope to the Indian caves or rock shelters,⁶ whence we get a glimpse of Spuyten Duyvil Creek to the northward through the trees. Round about are several good specimens of sugar maple, and in season one may find in this vicinity the blue cohosh (*Caulophyllum thalictroides*) and the Dutchman's breeches (*Dicentra Cucullaria*). Continuing down the path to the river we come out into open ground—evidently an old Indian feasting ground, if one is to judge by the numbers of oyster shells imbedded in the earth on all sides. In the rear of a large sign, recently erected, "Shorakapkok: Indian Village Site," we see a good example of the native beech, 6 feet 8 inches in circumference measured 4 feet from the ground, with a few smaller trees of the same species nearby. This, as far as I know, is the only colony of native beech in the park.

We find the spring near the Dyckman Institute museum and there we refresh ourselves, admiring meanwhile the giant tulip nearby, probably the largest and most famous tree in Greater New York. On it we read:

Tulip Tree
Liriodendron tulipifera
Circumference 19 Feet
Height 123 Feet
Age about 238 Years

HENDRICK HUDSON ENTERED THIS INLET IN 1609 AND MAY HAVE MET THE INDIANS HERE, WHO USED THIS PLACE FOR A CAMP AS SHOWN BY THE QUANTITIES OF OLD BROKEN OYSTER SHELLS AROUND THIS TREE AND NEARBY.

THIS TREE WAS THOROUGHLY REPAIRED AND THE FENCE
ERECTED AROUND IT, OCTOBER, 1912⁷

⁶ For excellent pen drawings and interesting descriptions of these, as well as of the whole neighborhood, see Torrey, Raymond H., Frank Place Jr., and Robert L. Dickinson, *New York Walk Book*, pp. 12-16. American Geographical Society; New York, 1923.

⁷ Since the above was printed the tree has again been repaired and the inscription erased. Probably it will be replaced by a similar one.

With the help of a boy scout I measured this tree again July 8, 1930, with results as follows:

Circumference, 4 feet from ground: 17 feet, $9\frac{1}{4}$ inches.

“ 1 foot from ground: 23 feet, $6\frac{1}{2}$ inches.

“ at ground level, including projecting root buttresses: approximately 30 feet.

3. *Hill of the Five Oaks*. We may best reach this by continuing up Payson Avenue from Dyckman Street.⁸ Just beyond the last house on the right we enter the little plateau-like region where typical specimens of fair size of the following species of oak may be seen:

- Quercus alba*
White Oak
- Quercus montana*
Chestnut Oak
- Quercus velutina*
Black Oak
- Quercus coccinea*
Scarlet Oak
- Quercus borealis*
Red Oak

The relative position of the different individuals may be seen from the accompanying map (Fig. 3.). From the Hill of the Five Oaks we may descend into Shorakapkok Glen by taking any one of a number of paths leading down the hill to the left.

4. *Cock Hill*. We may reach this by taking the path westward from the Glen, and paralleling the Spuyten Duyvil Creek. The grade mounts steadily upward, and a side path to the southward leads us to the top of the cliff, or we may continue on the original path to the viewpoint

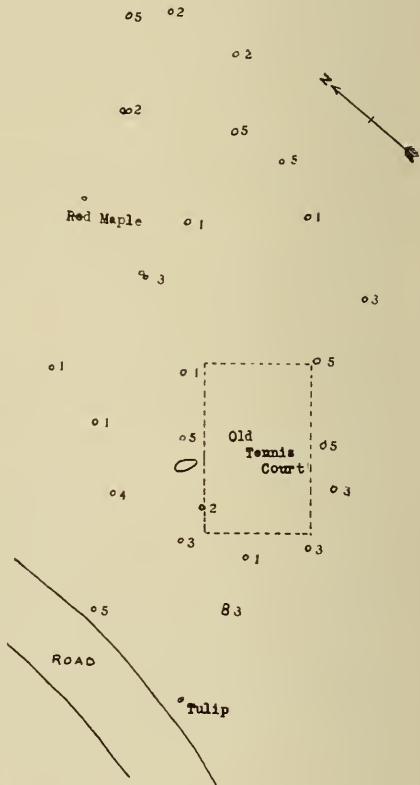


FIGURE 3. Showing location of the five species of oak on the Hill of the Five Oaks. 1, White Oak; 2, Chestnut Oak; 3, Black Oak; 4, Scarlet Oak; 5, Red Oak. One inch = approximately 70 feet.

which includes a sweep of the Hudson and the mouth of Spuyten Duyvil Creek. The path to the cliff leads to a road near the cliff edge and here we find among the ruins of old buildings a variety of interesting plants. The white willow, which is not of common occurrence, appears to be established here; and clinging to old masonry with a little soil mixed with crumbling mortar I have found the Kenilworth ivy, *Linaria Cymbalaria*, a pretty little creeping herb, apparently encouraged by the presence of the lime, and well established. There are many interesting and handsome planted specimens of exotic and introduced trees and shrubs to be seen on the hill, such as the copper or purple beech, Austrian pine, paulownia, weeping cutleaved birch, etc. A tree of the red ash grows near the cliff road and has been apparently planted. Another individual, probably native, may be seen just northwest of the Dyckman Institute building in the Shorakapkok Glen and close to the river. The twigs and leaves are downy and the habit is more spreading than in the white ash. The large white pines growing on Cock Hill are probably planted.

A proposed List of Plants of Inwood Park. It would be interesting and certainly valuable as a record to have a complete list of the plants growing at the present time in Inwood Park, as well as the other parks of greater New York—at least for those which are still fortunately maintained in a wild or semi-wild condition. This might form an objective for some of the Club's field trips in the future. That the flora of Inwood has changed, the following list of orchids collected there, in 1866–8 chiefly by Dr. H. M. Denslow, his uncle Mr. W. W. Denslow, and others, bears witness. These plants seem to have long since vanished.⁹ The data for this list have been kindly furnished by Mrs. Palmyre DeC. Mitchell of the New York Botanical Garden.

1. *Orchis spectabilis* L. May 14, (no year given, but evidently 1887. See Bull. Torr. Bot. Club 14: 153. 1887.) Miss E. Cannon.
2. *Pogonia trianthophora* (Sw.) BSP. "N.Y. Island" Wm. Bower, 1866.

⁸ Or, after leaving Ostrya Hill we may continue northeastward on the road.

⁹ See also Denslow, H. M., Native orchids in and near New York. *Torreyana* 27: 61–63 1927.

3. *Spiranthes gracilis* (Bigel.) Beck. Sept. 1867. H. M. Denslow.
4. *Epipactis pubescens* (Willd.) A. A. Eaton. Sept. 1867. H. M. Denslow.
5. *Corallorrhiza odontorhiza* Nutt. Sept. 1867. H. M. Denslow.
6. *Liparis liliifolia* (L.) Richard. Sept. 1, 1867 "Ex Herb. W. W. Denslow."
- Liparis liliifolia* (L.) "Inwood, N.Y. Isl.", June 23, 1868. H. M. Denslow.
7. *Tipularia discolor* (Pursh) Nutt. Flint's Woods, Inwood, north and west slope. Aug. 23, 1867. "Herb. W. W. Denslow."

As a beginning of a list of the plants of the present time I have recorded below the woody plants now growing without cultivation. Undoubtedly additions can be made to this list. It is interesting to note that of the 70 species recorded, at least 16 (the starred species) or over 20 per cent, are introduced:

LIST OF WOODY PLANTS GROWING NATURALLY
IN INWOOD PARK

- Tsuga canadensis* (L.) Carr. Eastern Hemlock
- **Salix fragilis* L. Crack Willow
- **Salix alba* L. European White Willow
- Salix cordata* Muhl. Heart-leaf Willow
- **Populus alba* L. White Poplar
- Myrica carolinensis* Mill. Bayberry
- Juglans cinerea* L. Butternut
- Juglans nigra* L. Black Walnut
- Carya ovata* (Mill.) K. Koch. Shagbark Hickory
- Carya alba* (L.) K. Koch. Mockernut Hickory
- Carya glabra* (Mill.) Spach. Pignut Hickory
- Carya cordiformis* (Wang.) K. Koch. Bitternut Hickory
- Corylus americana* Walt. Hazelnut
- Ostrya virginiana* (Mill.) K. Koch. Hop-hornbeam
- Carpinus caroliniana* Walt. Blue Beech
- Betula lenta* L. Sweet Birch
- Alnus rugosa* (Du Roi) Spreng. Smooth Alder
- Fagus grandifolia* Ehrh. Beech
- Quercus alba* L. White Oak
- Quercus montana* Willd. Chesnut Oak
- Quercus borealis* Michx. f. Red Oak
- Quercus coccinea* Muench. Scarlet Oak
- Quercus velutina* Lam. Black Oak
- Ulmus fulva* Michx. Slippery Elm
- Ulmus americana* L. American Elm
- Celtis occidentalis* L. Hackberry
- Morus rubra* L. Red Mulberry

- Liriodendron tulipifera* L. Yellow Poplar
Menispermum canadense L. Moonseed
Sassafras variifolium (Salisb.) Ktze. Sassafras
Benzoin aestivale (L.) Nees. Spice Bush
Hamamelis virginiana (L.) Witch-hazel
Platanus occidentalis L. Sycamore
**Pyrus Malus* L. Wild Apple
**Pyrus communis* L. Pear
**Rubus phoenicolasius* Maxim. Wineberry
Rubus occidentalis L. Black Raspberry
Rubus villosus Ait. Dewberry
Rubus allegheniensis Porter. High Blackberry
Prunus serotina Ehrh. Black Cherry
**Prunus avium* L. Sweet Cherry
**Prunus persica* (L.) Stokes. Peach
**Robinia Pseudo-Acacia* L. Black Locust
**Ailanthus glandulosa* Desf. Ailanthus
Rhus typhina L. Staghorn Sumach
Rhus glabra L. Smooth Sumach
Rhus toxicodendron L. Poison Ivy
Celastrus scandens L. Climbing Bittersweet
Acer saccharum Marsh. Sugar Maple
**Acer platanoides* L. Norway Maple
Acer rubrum L. Red Maple
**Aesculus Hippocastanum* L. Horse-chestnut
Psedera quinquefolia (L.) Greene. Virginia Creeper
Vitis aestivalis Michx. Summer Grape
Tilia glabra Ventenat. Basswood
Cornus florida L. Dogwood
Cornus Amomum Mill. Kinnikinnik
Nyssa sylvatica Marsh. Black Gum
Vaccinium vacillans Kalm. Late Low Blueberry
Vaccinium corymbosum L. High Blueberry
Fraxinus americana L. White Ash
Fraxinus pennsylvanica Marsh. Red Ash
**Solanum Dulcamara* L. Bitter Nightshade
**Paulownia tomentosa* (Thunb.) Steud. Royal Paulownia
**Catalpa bignonioides* Walt. Common Catalpa
**Lonicera japonica* Thunb. Japanese Honeysuckle
Viburnum acerifolium L. Maple-leaf Viburnum
Viburnum prunifolium L. Black Haw
Sambucus canadensis L. Common Elder
Smilax rotundifolia L. Green Brier

The following probably also occur:

- Rubus odoratus* L. Purple Flowering Raspberry
Gaylussacia baccata (Wang.) C. Koch. Black Huckleberry
Sambucus pubens Michx. Red-berried Elder
Amelanchier canadensis (L.) Medic. Serviceberry

BROOKLYN BOTANIC GARDEN,
 BROOKLYN, N. Y.